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ABSTRACT

Rapidly changing patterns of birthrates over the past several decades have created a Canadian and North American population whose age structure shows continuing and potentially oscillating changes in its age group distribution. The increased participation of women in the workforce and their promotional aspirations further complicate what were already complex societal problems resulting from the post-war baby boom. This variability in age group distribution leads not only to marked changes in community college enrollments, but also to major job and promotional difficulties, and finally, to possible changes in retirement patterns for current and prospective graduates. For demographic reasons, those born at the end of the post-war baby boom and in the mid- and late 1960's are likely to find themselves particularly disadvantaged with respect to career development and job promotion. Governmental fiscal policies, transnational corporations, and third-world development patterns are likely to have a major impact on the career prospects of this group. An examination of these three factors provides an insight into the future working world that suggests general directions in which student and program resources might be reallocated, and, in particular, some general education courses that might be developed. Such courses might be in the areas of future studies, cope-ability development, and personal growth and development. (Author/AYC)

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GENERAL EDUCATION
FOR THE
TOO LATE GENERATION

by

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A paper presented to the second annual assembly of the Education Section of the World Future Society, University of Minnesota, Minneapolis. October 19, 1979.

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GENERAL EDUCATION

FOR THE

TOO LATE GENERATION

By the year 2000 A. D., the average age of most of the full-time students presently enrolled in community colleges will still be only 41-42 years -- early middle age for them. If the retirement age remains at 65 -- as set originally by Bismark, most will not retire until about 2025 A. D.

Community college educators responsible for the general education component in career programs, may ask themselves a series of questions:

TRADITIONAL QUESTIONS

A. WHAT IS THE RELEVANCE OF THE TRADITIONAL DISCIPLINES IN A CAREER-ORIENTED CURRICULUM?

B. IN COMPETITION FOR THE STUDENT'S TIME, WHICH DISCIPLINES ARE MORE CRITICAL TO THE STUDENT'S LONG-TERM WELL-BEING?

C. WHAT WEIGHT SHOULD BE ATTRIBUTED TO THE STUDENT'S INTEREST?

While I would not suggest that answers to these questions are any less important than they were 10, 20, 50 years ago, I believe that we need to ask additional questions and seek answers to them.

Whether one takes an optimistic or a pessimistic view of the future, it is quite certain that our students will witness tremendous changes in their lifetime.

Long-term forecasts predict that, by 2000 A. D. -- only 20 years down the road -- a time span not much greater than that separating us from the Bay of Pigs episode, up to 90% of the labour force could be in service industries, and that as little as 2% of the total labour force might be required to turn out all necessary manufactured goods.

What of demographics? It is very "in" these days to talk about the ending of the post-war baby boom through the secondary and post-secondary system, leading to decreases in enrolment, etc. At the same time that we are witnessing the passing of the tail end of the post-war baby boom through our high schools, colleges and universities, local hospitals record birth rates unparalleled in recent years -- the beginning of what is known as the "echo" of the post-war baby boom. This "echo" in population results from increased family formation by the post-war baby boom generation as it marries, settles down, and begins having children.

Continuing automation, increasing penetration of computers, microcomputers and microprocessors into people's everyday life will have yet other, perhaps less predictable effects on the life of our present students. Relatively new practices such as temporary work forces, management by exception, the four-day work week, job sharing, "flexi-time," and gradual retirement, to mention but a few, may be part of the everyday experience of our students.

Faced by these considerations, the general educator should ask himself additional questions:

FUTURE-ORIENTED QUESTIONS

A. WHAT SORT OF ENVIRONMENT WILL OUR GRADUATES FIND THEMSELVES IN 10 - 20 YEARS FROM NOW?

B. IN WHAT MAJOR WAYS WILL THAT ENVIRONMENT CHANGE AND DIFFER FROM THAT IN WHICH THEY HAVE GROWN UP AND BEEN EDUCATED?

C. HOW SHOULD CURRENT COURSES BE MODIFIED TO RESPOND TO THESE POSSIBLE CHANGES?

D. WHAT NEW COURSES SHOULD BE DEVELOPED TO HELP STUDENTS TO COPE WITH NEW CONDITIONS?

It should not be too difficult to formulate answers to the first two questions. First of all, the students now enrolling in community colleges and in universities represent the tail-end of the post-war baby boom. They will throughout their working life find themselves preceded in the work force by an exceptionally large group -- because of the post-war baby boom -- of individuals not many years older, but having that much more experience. This will be a unique experience: hitherto, population pyramids have rarely, if ever exhibited such massive bulges as have been caused by the post-war baby boom. When such bulges have occurred, they have been more localized, rather than being national, or global in scale.

Owing to attitudinal change, the fertility rate started to drop, and has, in many parts of North America, plummetted well below the replacement level. In Canada, the crude birth rate has dropped from a high range of 27.1 - 28.5 over the period 1948 - 1959 to an all-time low of 15.4 in 1974. the most recent data, for 1975, is 15.7.

The gross reproduction rate has ranged from 1.640 in 1946 to a high of 1.915 in 1959. Since 1963, it has dropped sharply from 1.788 to 0.881 in 1975 -- well below the replacement level of 1.000. Among the provinces, Quebec, British Columbia, and Ontario had the lowest gross reproduction rates in 1975 -- all well below the replacement level,

Similarly, in the United States, the national fertility rate dropped below the replacement level in 1972, and all signs still point in the direction of the zero population growth level, or even lower.

This tremendous decrease in fertility would suggest that -- barring dramatic increases in automation and computerization -- a shortage of workers may start developing in the 1990's and spread gradually upward to supervisory and managerial levels.

From this simple analysis -- and we should not forget that many other factors will affect the ultimate work environment of our present students -- we can nevertheless draw the conclusion that the students now enrolled and likely to enrol in post-secondary institutions within the

decade or so will find themselves in a unique work situation. As a group they will always be following a much larger group competing for promotion, a group which because it is a little older, and a little more experienced, as a group -- will tend to get the jobs. The Too Late Generation, as I call the group of students now enrolling in post-secondary institutions, are likely therefore, -- throughout their career -- to be at a competitive disadvantage. Ironically, the pinching in the population pyramid resulting from the decreases in birth rate also means that there may be insufficient "juniors" to fill lower level positions, so that the Too Late Generation may be partly held back in junior positions, for lack of both promotion opportunities, and replacement junior workers. By contrast, the workers more junior to the Too Late Generation may quite possibly experience opportunities for advancement resembling more closely those of the 1960's.

There is, however, another factor which is likely to make the job market even tougher for the Too Late Generation: rapidly increasing participation by women in the work force. North American women are fast catching up to European women in terms of the percentage of them participating in the labour force.

For the province of Ontario, the increase in participation of women in the workforce has been very marked:

TABLE 1: WOMEN IN THE ONTARIO LABOUR FORCE AND THEIR PARTICIPATION RATES (STATISTICS CANADA)

YEAR	NUMBER	PARTICIPATION RATE
1958	600,000	29%
1968	1,010,000	40%
1978	1,667,000	52%

By many European standards, 52% participation by women in the labour force would be considered very low. Figures of 60 - 70% participation rates are quite common in European countries. Current indications are that Canadian women are continuing to join the work force at steadily increasing participation rates

TABLE 2: POPULATION AND LABOUR FORCE BY SEX, ONTARIO 1968 AND 1978

POPULATION	SEX	1968	1978	% INCREASE
OVER 14	MALE	2,425	3,095	27.6
(000'S)	FEMALE	2,519	3,238	28.5
LABOUR	MALE	1,970	2,480	25.9
FORCE	FEMALE	1,010	1,667	65.0

During the decade 1968 - 1978, the male labour force increased by 25.9%, slightly lower than the increase in size of the male population. By contrast, the female labour force increased by 65.0% -- more than twice the rate of the female

population. This rise in participation has greatly increased women's share of the total work force. It rose from 33.9 percent in 1968 to 40.2 percent by 1978.

What are some results from these demographic and societal changes?

1. Tremendous pressure for job creation, while at the same time attempting to maintain productivity to remain competitive in international markets.

   These high rates of expansion of the labour force make the problem almost insoluble. For example, in Ontario, the total labour force stood at 4,147,000 in 1978. During the past year, over 135,000 new jobs were created, corresponding to 3.3 percent of the labour force, yet unemployment remains high, particularly among those under 25 years of age.

   There exists also a marked disparity between the projected growth rate for the population, and the corresponding rate for the labour force over the next 15 years. While the minimum growth rate in the population over the period 1971 to 1991 is estimated to be 23 percent, the corresponding minimum growth rate in the labour force will be 52 percent -- more than twice as great. The maximum population growth rate projected (40 percent) would lead to a 59 percent growth in the labour force.

2. Continuing, and increasing, competition for desirable jobs. Will the best qualified candidate succeed in

getting that desirable position, or will he or she lose out through lacking the skills necessary to present himself or herself most effectively in the candidate selection process.

3. Increasing penetration of traditional male preserves by women. When Sheridan College opened, the majority of our students were male, and no women were enrolled in our Business Administration program. Now, twelve years later, the majority of our students is female, and about one third of the students enrolled in the Business Administration program is women. Similar statistics can be produced for program after program. The reverse of this trend -- increased male participation in traditional "female" programs such as secretarial, early childhood education, and nursing has not yet happened, owing presumably to the generally low rates of pay and lack of career prospects for graduates of many of these programs.

   In other words, more and more women are and will be competing for jobs with an already very large number of male graduates.

4. There may be a big surplus of labour to be absorbed -- without reducing productivity growth. To accomplish this, downward adjustment may be less noticeable in the price of domestically produced goods as compared to the price of imported goods -- in other words, lowered

value of the dollar. The recent sharp rise in the price of gold is but one manifestation of this adjustment. The conflict between still too high expectations and the more sober, realistic prospect of the world market will occupy the political arena for some time. Even for skilled adults, unemployment rates could worsen. (Andersen, 1977)

Our real incomes have substantially outpaced our productive effort. Between 1972 and 1976 real personal disposable income rose by 30 percent while the real domestic product grew by only 17 percent. (Grant, 1977)

5. Changes in the job mix. The projected change to a post-industrial society will also lead to dramatic changes in the job "mix," from primary production to services.

By 1985, Bell Canada expects a 30 percent increase in the managerial proportion of its work force, to the extent that 28 percent of its work force will consist of managerial staff. Over this time period, a reduction in the work week is expected to create 5000 new jobs (Anon., 1977a)

Increasing pressures on all levels of government to "live within their means" so to speak will lead to increasingly restrictive budgets. A likely outcome of such fiscal restraint is an increasingly difficult

job market for graduates of those programs for which governments and their agencies are the major employers.

By 1985 too, those aged 24 - 44 will represent an unprecedentedly high proportion of the work force. It is worth noting that this age group will include virtually all graduates produced by Ontario community colleges up to 1981.

6. International constraints. The RIO (Re-shaping the International Order], the North-South Dialogue, and the recent Club of Rome report, "Goals for Mankind" (LAS2L0, 1977) all have one clear message: the urgent need to bring about rapid economic growth in LDC's, at the expense, if necessary, of DC's. The developmental mobility of transnational corporations' investments, and the generally lower production costs and environmental constraints in LDC's all would tend to accentuate this shift. In real terms, this trend corresponds to an export of jobs, real or potential. As the Canadian economy is still heavily resources-based, is weak at the manufacturing level and even weaker at the high-technology level, the Canadian economy is particularly vulnerable to such shifts in production.

In 1970 the DC's contained 30 percent of the world's population, by 1990, it is estimated that this figure will have shrunk to 22 - 28 percent, depending on total world population.

IMPACT ON THE STUDENT/GRADUATE'S LIFE AND CAREER

It is quite evident that the various factors refered to will have a major impact on those graduates entering the labour force within the next 10 years. Owing to their position at the end of the post-war baby boom, and the beginning of the major reduction in birth rates, they will, throughout their working life, find themselves in competition against a vast number of individuals of roughly similar age. However, throughout their working life, there will also be unprecedentedly large numbers of their approximate age group who will be a few years older, will consequently have a few more years' experience, and will inevitably have a distinct advantage over them. This effect will become even more marked for graduates from 1983 onwards.

This group of graduates may also, as they become aware of the improved job opportunities available to later graduates (post 1987), resulting from the much lower birth rates in the early 1960's, perceive themselves as a disadvantaged generation. In effect, throughout their working life, they will probably find themselves at the end of the queue -- for their first job, for promotions, for advancement. They may also notice that the queue shortens dramatically almost immediately behind their age group.

In a supreme irony, if the fertility rate throughout their working life remains near the replacement level, they may even find, when they reach 65, that they can not retire

for one or both of two possible reasons -- too few workers, or too few taxpayers to pay the high cost of universal pensions.

It is quite evident from this analysis, that this group of students will need all the help it can be given in coping with a greatly disadvantaged position. Some specific concerns that may arise include:

DISCOURAGEMENT, DISAPPOINTMENT,

GREAT DIFFICULTY IN ACQUIRING THE REQUISITE EXPERIENCE,

POOR RESUME RECORD, SHOWING PERHAPS EXTENDED PERIODS OF UNEMPLOYMENT

GRIEVANCE THROUGH SEEING THEMSELVES AS A PARTICULARLY DISADVANTAGED GENERATION THROUGH NO FAULT OF THEIR OWN

Student/graduate attitudes that may alleviate the impact of adverse conditions:

STUDENT FLEXIBILITY -- WILLINGNESS TO TAKE RELATED JOBS

SELECTION OF PROGRAMS FROM WHICH ENTRY INTO A CAREER PATH IS MAXIMISED -- BROADLY-BASED, RATHER THAN NARROWLY-BASED PROGRAMS

GRADUATE MOBILITY - WILLINGNESS TO ACCEPT A "POOR" JOB IN ORDER TO MOVE TO A BETTER JOB

CONSIDER POSITION IN OUT-OF-THE-WAY PLACES

JOB SHARING

SHORTER WORK WEEKS FOR LESS PAY

INCREASED EMPHASIS ON CONTINUING EDUCATION/UPGRADING/ RETRAINING

Gloom will not be endless either, as specific new job opportunities are likely to develop as well, in the longer term in:

AGRICULTURE

AGING - ESPECIALLY FOR PARAMEDICS

RECREATION, PHYSICAL EDUCATION

HEALTH/NUTRITION COUNSELLING

HUMAN RESOURCES MANAGEMENT

INTERNATIONAL DEVELOPMENT

PUBLIC RELATIONS AND COMMUNICATIONS

The year 2000 A. D. is 21 years away. Twenty-one years ago, in 1958, jet transport aeroplanes were being introduced, Sputnik had been launched a short time ago, the entire American space program -- including the communications breakthroughs -- was yet to come.

By the year 2000 A. D., the average age of our present students will still be only 41 - 42 years. If the retirement age remains at 65, most will not retire until about 2020 - 2025 A. D. What changes they will experience in their lifetime are not easy to predict that the rate of technological change may not slow down.

Changing social and demographic patterns will doubtless see much greater utilization of relatively new practices such as temporary work forces, management by exception, the four-day work week, job sharing, gradual retirement, to mention but a few.

HOW MIGHT OUR COURSES BE CHANGED?

In view of these likely changes in the nature of work, and the near impossibility of predicting long-term labour market trends, it seems desirable to incorporate as much "copeability," to quote Toffler, as possible in our student's educational experience.

The single most important characteristic that we could impart to our students is adaptability. Adaptability means that the student should acquire, as much as possible, skills that will not become obsolete, that are not dependent on the type of employer. We should also try to enhance the students' ability to adapt and use in new ways what they do know, and to learn more efficiently what they do not know. This occupational adaptability is unfortunately not an innate characteristic of individuals. While community colleges must continue maximizing the graduate's utility to her or his first employer, the time has now come to place renewed emphasis on the graduates' and society's longer-range needs. It is almost axiomatic that increasing mobility and changing labour scene characteristics may require people to be

trained and retrained a number of times in their lives.

The ability to transfer previously acquired skills and competences from one job setting to another is probably the most powerful ability we can impart to our students. The successful "survisor" of the 1980's, 1990's and the 2000's will, in all likelihood, possess to a marked degree the ability to transfer, to generalize from prior learning or experiences, to reorganize previously acquired skills, competences, knowledge and attitudes into new behaviour patterns, to meet the demands of new and changing situations. The most successful individuals will also possess the ability to learn from each new experience, to adapt his or her performance continuously, and to generate a variety of alternative approaches.

What are transferable competences? A few such competences will immediately come to mind: information seeking, setting priorities, oral communication, written expression and comprehension. Transferable competences can generally be grouped under at least five headings: mathematics, communication, interpersonal, reasoning, and manipulative competences. These competences are so fundamental as to be independent of "skill" or "program" courses, and "general education" courses. It may seem heretical, but dare one ask the question whether the nurturing of these fundamental competences -- the basis for effective citizenship and job satisfaction -- may sometime

be neglected in favour of imparting "program skills" or excessive "recall" content in general education courses?

In other words, should the acquisition of transfer capability be left as much to choice as presently it appears to be? What mix of "program" skills and transferable competences should be taught to provide an optimal preparation for employability, both for "program" jobs and across a variety of jobs? What levels of abstractions may be required to permit reasonably efficient transfer of competences to any given situation?

In the foregoing sections, some future trends have been identified. Some time ago, Roland, 1979, published an article entitled "The Microelectronic Revolution: How Intelligence on a Chip Will Change Our Lives," which projects a major impact of microprocessors on our lives. One could go on quoting paper after paper, document after document -- all attesting to the future being a period of rapid change, subject as so often to a great degree of uncertainty.

In spite of this uncertainty, some general conclusions can be drawn about the future:

CONTINUING OBSOLESCENCE OF MANY "TRADITIONAL" WAGE EARNING ACTIVITIES

INCREASING PENETRATION OF MICROCOMPUTERS AND MICRO-PROCESSORS IN THE INDIVIDUAL'S LIFE

INCREASING PARTICIPATION BY WOMEN IN THE CANADIAN WORKFORCE

GROWING ACCEPTANCE OF THE CONCEPT OF "THE ECOLOGICAL SOCIETY"/"THE CONSERVER SOCIETY"

INCREASING TREND TO PART-TIME STUDIES AND SHORT COURSES OR PROGRAMS, AS INDIVIDUALS RETURN TO EDUCATIONAL INSTITUTIONS TO ACQUIRE FURTHER SKILLS

CHANGING WORK PATTERNS IN TERMS OF JOB HOURS, JOB ACTIVITIES

GROWING IMPORTANCE OF THIRD WORLD COUNTRIES

The foregoing list is by no means exhaustive of the changes likely to happen during the lifetime of our students: it is meant only to give an indication of some of the changes that they may experience. It had been predicted that the advent of the "Post-Industrial Society" would cause a great shift in employment from the production sector to the service sector. More recently, futurists are expressing doubt about the rate of growth of the service sector, with more emphasis being placed on the need to maintain and create jobs. Hitherto, the trend in the Western world has involved a shift from labour-intensive production activities to capital and/or

energy intensive activities. The need to conserve energy, and to create more jobs may quite possibly see a reversal, or at least an attenuation of that trend.

WHAT NEW COURSES SHOULD WE DEVELOP?

What do we do? Is the future so unpredictable that one can not do anything? Assuredly not: on a relatively short-term basis, trends, as illustrated earlier, are fairly clear. On a longer-term basis, say beyond 2000 A. D., extrapolation may be more difficult. At this stage, we need to concern ourselves primarily with the relatively short-term trends.

We can greatly improve our students' survival skills by increasing their awareness of future trends in our courses, and by developing courses specifically designed to increase the students' cope-ability.

Even if the predictions for the future are only partially correct, we must place greater emphasis on helping the student to cope effectively with change, to minimize resultant stress.

It would seem self-evident that students should be made aware of these inexorable trends and their possible implications on their life and career. The trends previously outlined are by no means all negative. Furthermore, graduates informed about these future trends will be more able to take appropriate action.

Within the general education course offering, new

courses have been developed and are offered side-by-side with the more traditional psychology, sociology, and history courses. These new courses fall into three main categories.

FUTURE STUDIES

INSIGHTS TO THE YEAR 2050 A. D.

CHANGING PATTERNS OF HUMAN POPULATIONS

COPE-ABILITY COURSES

*URBAN SURVIVAL (HOW TO LIVE IN A CITY)

*CAREER PLANNING AS SELF-EXPRESSION (OAKVILLE CAMPUS)

WOMEN AT WORK

*GET THAT JOB! A "HOW-TO" PRIMER (BRAMPTON CAMPUS)

*ORAL COMMUNICATION

PERSONAL GROWTH AND DEVELOPMENT

*LIFESTYLES FOR A CHANGING SOCIETY

*SOCIAL AND INTERPERSONAL RELATIONS

*TOWARDS TOTAL FITNESS

*ALGONQUIN EXPERIENCE

*CITIZEN LEADERSHIP IN RECREATION

*INTERPERSONAL EFFECTIVENESS (BRAMPTON CAMPUS)

*SOCIAL AND INTERPERSONAL RELATIONS (OAKVILLE CAMPUS)

While this listing might seem longer perhaps than necessary, and perhaps also somewhat repetitive, most courses are the individual creation of particularly concerned teachers and counsellors who teach one or two classes of the course in addition to their regular "discipline" courses.

This limitation, and timetabling patterns prevent students' taking two similar courses for credit. The courses marked with an asterisk are called "general studies" courses, because of their more "applied" nature. In order to maintain the integrity of the academic general education program, students are currently limited to taking no more than one of these courses among their four general studies courses.

This cluster of courses has become very popular with students. Course evaluations at the end of each course provide very positive feedback. To date we have not attempted to assess long-term impact of these courses on the student's personal and career success. Insufficient time has elapsed since most of these courses have become available to students for them to have had a major impact on graduates' careers. Most of these courses are but 2 - 3 years old. There is, additionally, a methodological problem in terms of measuring the impact on a person's career of only one course, out of some 20 or 30 courses in total.

In the remaining time, course content and course outlines, for specific courses of particular interest to the audience were reviewed.

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